[0458] An EL layer **4505** is formed on the pixel electrode **4504**. Note that, although only one pixel is shown by **FIG. 24**, an EL layer corresponding to the color G (green) is formed in Embodiment 10by an evaporation method or an application method (preferably spin coating). Specifically, a lamination structure is used, in which a 20 nm thick lithium fluoride (LiF) film is formed as an electron injecting layer, and a 70 nm thick PPV (polyparaphenylene vinylene) film is formed on the LiF film as a light emitting layer.

[0459] Next, an anode **4506** is formed on the EL layer **4505** from a transparent conducting film. A conducting film composed of a chemical compound of indium oxide and tin oxide, or a chemical compound of indium oxide and zinc oxide, is used as the transparent conducting film in the case of Embodiment 10.

[0460] An EL element **4507** is completed at the point where the arode **4506** is formed. Note that the EL element **4507** referred to here indicates a capacitor formed by the pixel electrode (cathode) **4504**, the EL layer **4505**, and the anode **4506**.

[0461] For a case of a high voltage equal to or greater than 10 V applied to the EL element, degradation due to the hot carrier effect in the EL driver TFT **4501** appears. It is effective in this case to use an n-channel TFT, having a structure in which an LDD region **4509** of a drain region side overlaps with the gate electrode **4502** through the gate insulating film **4510**, as the EL driver TFT **4501**.

[0462] Further, the EL driver TFT **4501** of Embodiment 10 forms a parasitic capacitance between the gate electrode **4502** and the LDD region **4509** referred to as a gate capacitance. By regulating the gate capacitance, it can be made to possess a function similar to that of the storage capacitor **4418** shown in **FIGS. 23A and 23B**. In particular, the capacitance of the storage capacitor may be smaller for a case of operating the EL display device by a digital driving method than for a case of an analog driving method operation, and therefore the storage capacitor can be substituted by the gate capacitance.

[0463] Note that for cases in which the voltage applied to the EL element is 10 V or less, preferably equal to or less than 5 V, there is almost no problem of degradation due to the above hot carrier effect, and therefore an n-channel TFT having a structure in which the LDD region **4509** is omitted may also be used in **FIG. 24**.

[0464] Embodiment 11

[0465] An EL display device of a display portion of a portable information terminal of the present invention may also have a structure in which several TFTs are formed within a pixel. For example, 4 to 6 or more TFTs may be formed. It is possible to implement the present invention without placing any limitations on the pixel structure of the EL display device.

[0466] Embodiment 12

[0467] An EL display device used in a display portion of a portable information terminal of the present invention is not limited to an active matrix type, and a passive type may also be used. A cross sectional diagram of a display portion of an EL display device used in Embodiment 12is shown in **FIG. 26**.

[0468] Anodes **2602** are formed having a rectangular strip shape in alignment on a substrate **2601**. A matrix shape insulating film **2603** is formed on the substrate **2601** covering the anodes **2602**. Banks **2604** are then formed on the insulating film **2603** in order to separate adjacent EL layers and cathodes.

[0469] It is preferable to use a material having insulating characteristics to form the bank **2604** in order to also electrically separate the adjacent EL layers and cathodes.

[0470] EL layers **2605** and cathodes **2607** are then formed and laminated in order on a passive substrate having the substrate **2601**, the anodes **2602**, the insulating film **2603**, and the banks **2604**. The EL layers **2605** and the cathodes **2606** which are adjacent, sandwiching the banks **2604**, are separated by the banks **2604**.

[0471] The passive type EL display device has an easier method of manufacture, and a lower cost, than the active matrix type EL display device. It is therefore possible to lower the cost of the portable information terminal itself by using the passive type EL display device in the display portion of the portable information terminal of the present invention.

[0472] Note that the passive type EL display device used in the display portion of the portable information terminal of the present invention is not limited to the structure shown by Embodiment 12. A passive type EL display device used in the display portion of the portable information terminal of the present invention may have any type of structure.

[0473] It is possible to implement Embodiment 12by freely combining it with Embodiment 1 or Embodiment 7.

[0474] Embodiment 13

[0475] A structure of a liquid crystal display device of a display portion of a portable information terminal of the present invention is explained in Embodiment 13. An example of a schematic diagram of the liquid crystal display device of Embodiment 13is shown in **FIG. 27**.

[0476] A source signal line driver circuit **1301** and a gate signal line driver circuit **1302** are a portion of a driver circuit. Source signal lines **1303** connected to the source signal line driver circuit **1301**, and gate signal lines **1304** connected to the gate signal line driver circuit **1302** intersect in a display portion **1308**. A pixel thin film transistor (pixel TFT) **1305**, a liquid crystal cell **1306** in which a liquid crystal is sandwiched between an opposing electrode and a pixel electrode, and a storage capacitor **1307** are formed in regions having the source signal lines **1303** and the gate signal lines **1304**.

[0477] An analog video signal (analog signal having image information) input to the source signal lines **1303** is selected by the pixel TFTs **1305** and written into predetermined pixel electrodes.

[0478] The analog video signal, sampled by a timing signal output from the source signal line driver circuit **1301**, is supplied to the source signal lines **1303**.

[0479] Switching of corresponding pixel TFTs **1305** is performed in accordance with a gate signal output from the gate side driver circuit **1302**, and the liquid crystal of the liquid crystal cells **1306** is driven in accordance with the